Boosting microwave effects on flowing material - by internal displacement with mechanical stirrer or bellow

Publication number: DE3930337
Publication date: 1991-03-14

Publication date:

1991-03-14 SCHULZE REINHARD (DE)

Inventor: Applicant:

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Classification:

- international:

B01F7/16; B01F15/06; H05B6/64; H05B6/80;

B01F7/16; B01F15/00; H05B6/64; H05B6/80; (IPC1-7):

B01F7/00; B01F11/00; B01F15/06; H05B6/74;

H05B6/78; H05B6/80

- european:

B01F7/16H; B01F15/06G; H05B6/64; H05B6/80

Application number: DE19893930337 19890912 Priority number(s): DE19893930337 19890912

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Abstract of DE3930337

A charge of material (2) to be melted and/or dissolved by microwave action undergoes such action while in a container (1) inside an outer housing (3), e.g. with magnetions (5) at opposite side walls. To accelerate the desired treatment, during or after irradiation at least part of the charge is circulated within the inner container by a mixer, e.g. a turbo-mixer (7) of known type, which while supported on a drive shaft (7) is lowered into the container, where it may execute a rotary pendulum motion. When not in use, the mixer may be withdrawn via an aperture in the outer housing into an upper safety container, with the aperture then covered by a sliding panel (12) to prevent microwave emission. Displacement of material may be provided by a fluid inflated bellows expanded and contracted while lowered into the inner container. ADVANTAGE -Distribution of energy and heat within the treated charge is more uniform, independently of techniques concerning microwave distribution.

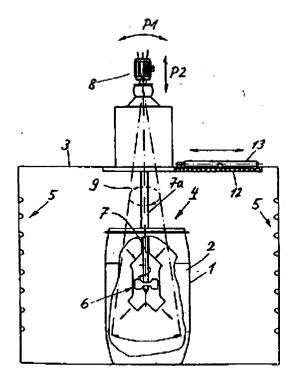


Fig. 2

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